1928

Iowa Corn Yield Test, Results for 1928

Joe L. Robinson
Iowa Corn and Small Grain Growers' Association and Iowa State University

A. A. Bryan
Iowa Corn and Small Grain Growers' Association and U.S. Department of Agriculture

Iowa Corn Yield Test, Results for 1928

Abstract
The purpose of the Iowa Corn Yield Test is to find for each section of the state those strains of corn which will produce the largest yields of sound grain. Significant difference in yield between strains grown in te t fields under as nearly as po ible the same conditions may be attributed to differences inherent in the strains. This publication is a progress report showing the comparative yield obtained in 1928 and the percentage yields for a period of years.

Disciplines
Agriculture | Agronomy and Crop Sciences

IOWA
CORN YIELD TEST

RESULTS FOR 1928

By Joe L. Robinson and A. A. Bryan

AMES, IOWA

The Iowa State Corn Yield test is conducted by the Iowa Corn and Small Grain Growers' Association in co-operation with the Farm Crops Section, Iowa Agricultural Experiment Station and the Office of Cereal Crops and Diseases, Bureau of Plant Industry, United States Department of Agriculture.

IOWA CORN YIELD TEST

RESULTS FOR 1928

By Joe L. Robinson[1] and A. A. Bryan[2]

PURPPOSE

The purpose of the Iowa Corn Yield Test is to find for each section of the state those strains of corn which will produce the largest yields of sound grain. Significant differences in yield between strains grown in test fields under as nearly as possible the same conditions may be attributed to differences inherent in the strains.

This publication is a progress report showing the comparative yields obtained in 1928 and the percentage yields for a period of years.

PLAN

The general plan of conducting the test in 1928 was essentially the same as in the three previous years.

LOCATION OF TEST FIELDS

The division of the state into northern, north central, south central and southern sections and of each section into a western, central and eastern district permits the numerous strains to be compared under local conditions. A strain may be entered for comparison in any district or section. The small, early maturing strains of northern Iowa, therefore,

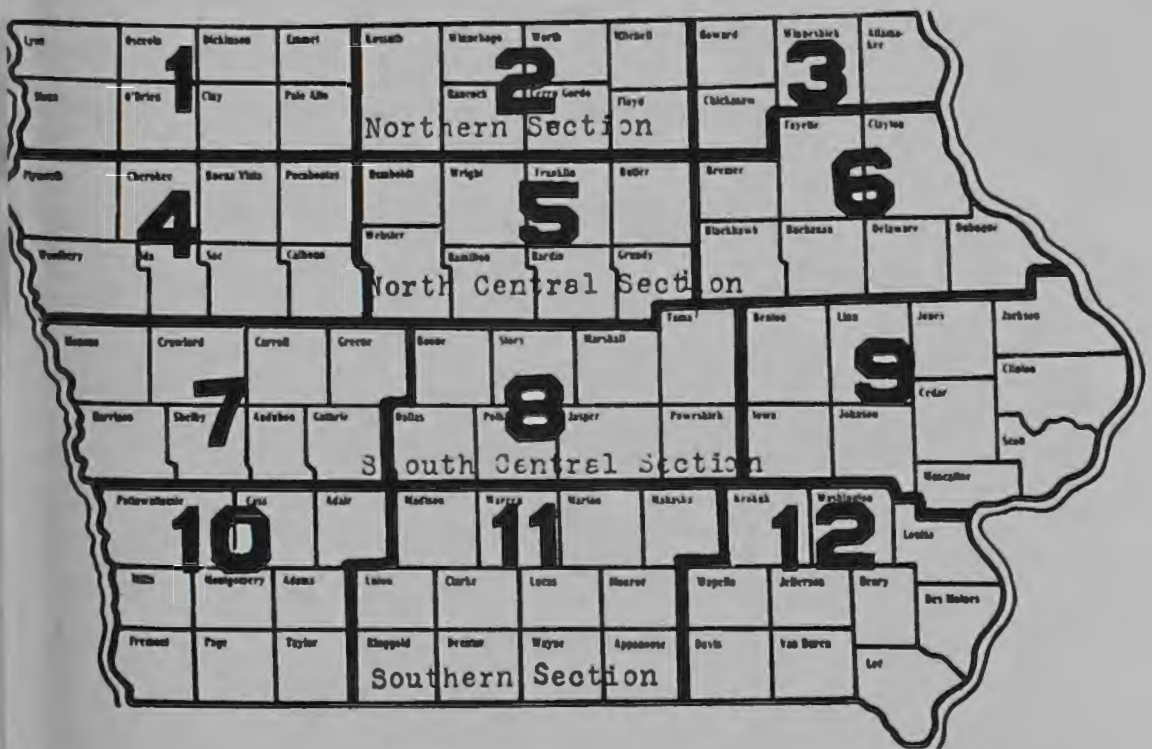

Fig. 1. The above map shows the division of the state into sections and districts for the state yield test.

[1]Secretary of the Iowa Corn and Small Grain Growers' Association and Superintendent of Co-operative Experiments at the Iowa Agricultural Experiment Station.

[2]Assistant Agronomist, Office of Cereal Crops and Diseases, Bureau of Plant Industry, United States Department of Agriculture, and Corn Yield Test Specialist for the Iowa Corn and Small Grain Growers' Association.

compete with one another under the conditions to which they are best suited and the large, late maturing strains grown further south are compared under the conditions to which they are adapted. The location of the test fields for 1928 is shown in Table I.

TABLE I. LOCATION OF FIELDS, RATE OF PLANTING, AND DATES OF PLANTING AND HARVESTING IN THE 1928 IOWA CORN YIELD TEST

District	County	Kernels Planted Per Hill	Date Planted	Date Harvested
1	Clay	4	May 9	Oct. 20—22
2	Cerro Gordo	4	" 10	" 23—24
3	Chickasaw	4	" 10	" 24—25
4	Buena Vista	3	" 8	" 17—19
5	Wright	3	" 7	" 15—16
6	Delaware	3	" 11	" 26—27
7	Carroll	3	" 7	" 15—18
8	Story	3	" 11—12	" 23—26
9	Jones	3	" 11	" 26—27
10	Mills	3	" 8	" 19—20
11	Marion	3	" 9	" 22—23
12	Henry	3	" 10	" 24—25

CLASSES OF ENTRIES

Hybrids between inbred strains of corn have been entered in the test since 1923. These hybrids have yielded more than the open-pollinated strains quite consistently. Seed of these hybrids or of strains for crossing to produce hybrid seed usually has not been available for general distribution. Furthermore, exactly the same hybrid has seldom, if ever,

Fig. 2. The above ears are representative of the entry which made the outstanding yield in the hybrid class.

been entered more than one year. It, therefore, seemed unfair to make strains involving no inbreeding compete with hybrids between inbred lines. Accordingly, beginning with the 1926 test, the strains have been divided into two classes, *open-pollinated* for those strains produced without inbreeding and *hybrid* for those strains whose production involved one or more inbred lines. The term inbreeding as here used assumes completely controlled pollination.

The yields of strains in the two classes are comparable, however, as the entries were grown side by side in the same field. The purpose of the classification primarily is for use in awarding premiums.

DISTRIBUTION OF ENTRIES

There were 513 entries in the 1928 test. Forty were received too late to be accepted. The Pathology Section of the Iowa Agricultural Experiment Station made 30 entries for the purpose of comparing seed treatments. These entries were not eligible for premiums because the seed used was purchased. Only 483 entries, therefore, are shown in the table of yields for 1928. Of this number 443 were made by Iowa growers, 10 by Illinois growers, and 30 by the Office of Cereal Crops and Diseases, Bureau of Plant Industry, U. S. Department of Agriculture. Table II gives the distribution of entries by classes in districts and sections.

A strain of corn entered by one individual in each of the three districts of a section is known as a section entry. A strain entered in one district is known as a district entry.

TABLE II. DISTRIBUTION OF DISTRICT AND SECTION ENTRIES IN THE 1928 IOWA CORN YIELD TEST

Section	District No.	Number of Entries		
		Open-Pollinated	Hybrid	Total
District Entries				
Northern	1	23	8	31
Northern	2	24	5	29
Northern	3	12	5	17
North Central	4	30	28	58
North Central	5	29	31	60
North Central	6	23	22	45
South Central	7	28	29	57
South Central	8	28	36	64
South Central	9	25	28	53
Southern	10	21	15	36
Southern	11	14	14	28
Southern	12	23	12	35
Total		280	233	513
Section Entries				
Northern	1— 2— 3	5	5	10
North Central	4— 5— 6	11	22	33
South Central	7— 8— 9	13	28	41
Southern	10—11—12	8	11	19
Total		37	66	103